

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**

## **REMARKS**

### **Allowable Subject Matter**

Applicants gratefully acknowledge the Examiner's indication that claims 1-9 and 14-16 recite allowable subject matter.

### **Amendments**

Claims 1-9 are amended to expressly recite weight percentages. See, e.g., page 3, lines 10-11. Also, claim 1 is amended to expressly recite the presence of iron. It is well known in the art that all steels, including austenitic steels, are iron alloys. Claim 2 is amended to correct an obvious typographical error, i.e., the range for Cr is amended to be 15 wt % to 18 wt %. See, e.g., page 3, line 6. Finally, claims 10, 11, 13, and 17-20 are cancelled.

New claims 21-30 are directed to further aspects of applicants' invention. See, e.g., page 3, lines 1-6; page 3, lines 27-31; and page 5, lines 4-13.

### **Claim Objections**

Claim 18 is cancelled and claim 2 is amended to recite that the range for Cr is 15 wt % to 18 wt %. Withdrawal of the claim objections is respectfully requested.

### **Rejection under 35 USC §112, second paragraph**

In this rejection it is alleged that the claims are incomplete for not reciting the presence of iron. The Examiner argues that steel must contain iron, but the claims do not expressly recite iron.

However, the original claims are not indefinite. Original claim 1 clearly recites that the composition is a steel. Steels are well known to be iron containing alloys, as is alluded to by the Examiner in the rejection. Thus, the recitation of "steel" inherently includes the presence of iron. See, e.g., Grant & Hackh's Chemical Dictionary, 5th Edition, p. 553 (1987) (copy enclosed) which defines steel as "a tough, elastic alloy of iron containing small quantities of carbon."


To facilitate prosecution, applicants have amended claim 1 to expressly recite that the composition contains iron. Withdrawal of the rejection is respectfully requested.

**Rejections under 35 USC §102 and §103**

Claims 10 and 17-20 are rejected as allegedly being anticipated in view of US 6,056,917. Also, claims 11 and 13 are rejected as allegedly being obvious in view of US 6,056,917 in combination with WO 01/00897. These rejections are rendered moot by the cancellation of claims 10, 11, 13, and 17-20. Withdrawal of the rejection and allowance of the instant application is respectfully requested.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,



Brion P. Heaney (Reg. No. 32,542)  
Attorney for Applicants

MILLEN, WHITE, ZELANO & BRANIGAN, P. C.  
2200 Clarendon Boulevard, Suite 1400  
Arlington, Virginia 22201  
(703)812-5308  
Internet address: [heaney@mwzb.com](mailto:heaney@mwzb.com)

**Filed: June 10, 2004**

# GRANT & HACKH'S CHEMICAL DICTIONARY

[*American, International, European and British Usage*]

*Containing the Words Generally Used in Chemistry,  
and Many of the Terms Used in the Related  
Sciences of Physics, Medicine, Engineering,  
Biology, Pharmacy, Astrophysics,  
Agriculture, Mineralogy, etc.*

*Based on Recent Scientific Literature*

FIFTH EDITION

*Completely Revised and Edited by*

**ROGER GRANT**

*M.A., D. de l'U., Ph.D., C. Chem., M.R.S.C. Consultant*

**CLAIRE GRANT**

*M.B., B.S., M.R.C.P.E. Medical Practitioner*

**McGRAW-HILL BOOK COMPANY**

*New York St. Louis San Francisco Auckland Bogotá  
Hamburg Johannesburg London Madrid Mexico  
Milan Montreal New Delhi Panama  
Paris São Paulo Singapore  
Sydney Tokyo Toronto*

Library of Congress Cataloging-in-Publication Data

Hackh, Ingo W. D. (Ingo Waldemar Dagobert), 1890-1938.  
Grant & Hackh's chemical dictionary.

Rev. ed. of: Chemical dictionary. 4th ed. 1969.

I. Chemistry.—Dictionaries. I. Grant, Roger L.  
II. Grant, Claire. III. Title. IV. Title: Grant &  
Hackh's chemical dictionary. V. Title: Chemical  
dictionary.

QD5.H3 1987 540'.3 86-7496  
ISBN 0-07-024067-1

Copyright © 1987 by McGraw-Hill, Inc. All rights reserved.  
Printed in the United States of America. Except as permitted  
under the United States Copyright Act of 1976, no part of this  
publication may be reproduced or distributed in any form or by  
any means, or stored in a data base or retrieval system, without  
the prior written permission of the publisher.

1234567890 DOCDOC 8943210987

ISBN 0-07-024067-1

The previous edition of this book was *Hackh's Chemical Dictionary*,  
4th ed., published by McGraw-Hill in 1969. It was prepared by Dr.  
Julius Grant from a *Chemical Dictionary* compiled by Ingo W. D.  
Hackh. The current, or 5th, edition of this book was prepared by Dr.  
Roger L. Grant, whose father prepared the 4th edition.

*The editors for this book were Betty J. Sun and Susan Thomas,  
the designer was Naomi Auerbach, and the production  
supervisor was Teresa F. Leaden. It was set in Palatino  
by University Graphics, Inc.*

*Printed and bound by R. R. Donnelley & Sons Company.*

essential oil consisting chiefly of the solid part (as, camphor) as opposed to the liquid part (as, eleoptene).

**stearoxylic acid**  $\text{Me}(\text{CH}_2)_7\text{CO}\cdot\text{CO}(\text{CH}_2)_7\text{COOH} = 312.5$ . 9,10-Dioxooctadecanoic acid\*. A solid, m.86, insoluble in water.

**stearoyl** Octadecanoyl\*. The radical  $\text{C}_{17}\text{H}_{35}\text{CO}-$ , from stearic acid.

**stearyl** The octadecanyl\* radical. s. alcohol  $\text{C}_{18}\text{H}_{38}\text{O} = 270.5$ . White flakes, m.58, insoluble in water; used in ointments (NF).

**steatite** A variety of talc.

**stechimetry** Stoichiometry.

**steel** (1) Carbon s. A tough, elastic alloy of iron containing small quantities of carbon:

Mild or soft steel . . . . . Less than 0.15% C  
Medium steel . . . . . 0.15–0.30% C  
Hard steel . . . . . More than 0.30% C

See *iron*. (2) Alloy steel. An alloy of iron whose properties are due to an element or elements other than carbon; as, Cr, Mn, Ni, W, Si. alloy ~ Iron and other metal, fused together and cooled rapidly. alloy-treated ~ S. containing metals added during manufacture for curative purposes. Cf. *alloy*. austenitic ~ Acid-resisting s. containing Cr 18, Ni 8, Mo 1–4%. bulletproof ~ S. containing Mn 12, C 1, P or S less than 0.02%. carbon ~ An alloy of iron and carbon without the addition of other metals. chrome-molybdenum ~ A light alloy of iron, with Cr 0.8–1.1, Mn 0.4–0.6, Mo 0.15–0.25, C 0.25–0.35%. chromium-nickel ~ See *stainless steel* below. high-speed ~ Iron alloys containing approximately C 0.65, Mn 0.2, Cr 4.7, Mo 8.5 (or W 17), V 5%; used for cutting tools, and does not lose temper if heated. nickel ~ See *nickel steel*. nickel-zirconium ~ A tough alloy of iron with Ni 2, Zr 0.34, Mn 1, Si 15, C 0.4%; used for armor plate and helmets. stainless ~ A s. containing Ni, Cr, or both; does not tarnish on exposure; used in corrosive environments. super ~ A high-speed s. containing 4% Co. Cf. *Carboloy*. tool ~ Similar to high-speed s., but with lower alloy content. Used for blanking and forming tools; also, as constituent of hard tools.

**Steele** S. acid An oxidizable form of abietic acid comprising 60–90% of the resin acids in tall oil. S. microbalance A quartz beam with a small quartz ball, whose buoyancy is changed by increasing or decreasing the air pressure. Sensitivity  $4 \times 10^{-6}$  mg. Used to measure the density of 0.1 mm<sup>3</sup> of radon (Ramsay and Gray).

**Steele** Trademark for a polyamide synthetic fiber.

**Stefan-Boltzmann** S.-B. equation S.-B. law. The radiation per m<sup>2</sup> per second from a black body (which is a perfect radiator) at thermodynamic temperature  $T$  to surroundings at thermodynamic temperature  $t_0 = \sigma(T^4 - t_0^4)$ . Cf. *Wien equation*. S.-B. constant\* The constant  $\sigma$  (sigma) of the S.-B. equation:  $\sigma = 5.67032 \times 10^{-8} \text{ W/m}^2/\text{K}^4$ .

**Steffen waste** A by-product in the manufacture of sugar from beet; a source of amino acids, particularly L-glutamic acid.

**steigerite**  $4\text{AlVO}_4 \cdot 13\text{H}_2\text{O}$ . A yellow mineral in Colorado uranium deposits.

**Stein, William Howard (1911–1980)** American biochemist. Nobel prize winner (1972). Noted for work on the structure of pancreatic ribonuclease.

**Stelazine** Trademark for trifluoperazine hydrochloride.

**stellar** (1) Pertaining to stars. (2) Star-shaped; as crystals. s. evolution See *spectral classification*. s. spectra See *spectral classification*.

**stellate crystals** Stellar- or star-shaped crystals; as, phenylglucosazone.

**Stellite** Trademark for nonferrous alloys of cobalt, chromium, and tungsten; used for metal-cutting steels, wear-resistant castings, and hard-facing welding rods.

**stem correction** The correction to a thermometer reading for the portion of the mercury column not in the liquid.

**Stemetil** Trademark for prochlorperazine maleate.

**stench** Malodorous gases used industrially to detect gas leaks.

**stenocarpine** Gleditschine.

**stenosation** A process for increasing tensile strength, e.g., of viscose fibers, by treatment with formaldehyde.

**stenosine** Sodium methyl arsenite.

**stephanite**  $5\text{Ag}_2\text{S} \cdot \text{Sb}_2\text{S}_3$ . A native sulfide.

**stepwise** s. decomposition Staircase reaction. s. dissociation A gradual dissociation.

**steradian\*** Symbol: sr; the SI unit for solid angle. The solid angle subtended by an area on the surface of a sphere equal to the square of the sphere's radius.

**Sterane** (1) Trademark for prednisolone. (2) (Not cap.) Androstane\*.

**stercobilin**  $\text{C}_{33}\text{H}_{46}\text{N}_4\text{O}_6 = 594.8$ . The normal pigment of feces, m.236; allied to urobilin.

**stercorite**  $\text{Na}(\text{NH}_4)\text{HPO}_4$ . Native microcosmic salt.

**stercorol** Coprosterol.

**Sterculia** A genus of tropical plants, used for edible seeds and barks, cordage, and mats. S. gum Indian tragacanth, Indian gum. A tragacanthlike exudation from *S. species* (India); absorbs water. Used as a laxative and in pharmacy (BP). Also a filler for ice cream. Cf. *hog gum*.

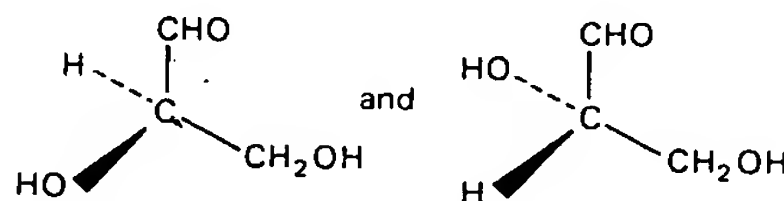
**Sterculiaceae** Softwood trees or shrubs; as, *Cola acuminata*, kola nut; *Theobroma cacao*, cocoa.

**stere** A French unit of wood measurement equal to 1 m<sup>3</sup> of stacked logs. Cf. *cord*.

**stereo-** (1) Prefix (Greek) indicating "solid" in structure or "three-dimensional." (2) Abbreviation for stereotype.

**stereochemistry** Spatial or configurative chemistry. The study of the spatial arrangement of the atoms in a molecule. absolute ~\* Absolute configuration\*. Term used to describe the 3-dimensional arrangement of substituents around a chiral element. relative ~\* Relative configuration\*. Term used to describe the positions of substituents on different atoms in a molecule relative to one another.

**stereoisomers\*** Stereoisomers. Isomers that differ only in the arrangement of their atoms in space. Thus, glyceraldehyde



has s., where (conventionally) broken lines represent a bond projecting behind the plane of the paper, a thick line one projecting out of the paper, and a normal line one in the plane of the paper. Steric relationships are described by *cis-trans* (Z,E), see below, and *sequence rule*, q.v., nomenclature. For additional details see *Nomenclature of Organic Chemistry*, IUPAC, Pergamon Press. See *isomer*. *cis-trans* ~\* Stereoisomers that differ only in the positions of atoms (or groups) relative to a specified plane in cases where these atoms are, or are considered as if they were, parts of a rigid structure. Atoms are termed *cis* (c) or *trans* (t) to one